PLANAR

LA1910R
and LA1910RTC

USER'S GUIDE

www.planar.com

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European Union 2002/95/EC Directive on the Restriction of Hazardous Substances (RoHS)

In February 2003, the European Union issued Directive 2002/95/EC on the Restriction of Hazardous Substances, commonly known as RoHS, in certain electrical and electronic equipment. It restricts the use of six hazardous substances, including lead (Pb).

The Directive states that all new products within its scope, placed on the European market after July 1, 2006 must be compliant with its requirements.

Planar Systems Inc. is fully in support of and compliant with EU Directive 2002/95/EC for applicable products within its scope.

A Planar part number will be modified with an "LF" suffix designation to indicate RoHS compliance, as shown on the part number label affixed to the display and on the box containing the display.

Important Recycle Instruction:

LCD Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at WWW.EIAE.ORG. For lamp specific disposal information check WWW.LAMPRECYCLE.ORG.

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Contents

Usage Notice

Precautions 4

Introduction

About the Product 5

Package Overview 7

Installation

Product Overview 8

User Controls

Front Panel Controls 12

How to Use the OSD Menus 13

On-Screen Display Menus 14

Appendix

Troubleshooting 18

Warning Signal 19

Product Dimensions 20

Video Modes 23

Touch Screen Driver Installation 24

Support and Service 26

Usage Notice

WARNING – To prevent the risk of fire or shock hazards, do not expose this product to rain or moisture.

WARNING – Please do not open or disassemble the product as this may cause electric shock.

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's guide to maximize the life of your unit.

Do:

- ❑ Turn off the product before cleaning.
- ❑ LCD front surface may be cleaned using a soft clean cloth moistened with mild window glass commercial cleaners or 50/50 mixture of water and isopropyl alcohol.
- ❑ Use only high quality and safety approved AC/DC power adapter that comes with your monitor.
- ❑ Disconnect the power plug from AC outlet if the product is not used for an extended period of time.

Don't:

- ❑ Do not touch the LCD display screen surface with sharp or hard objects.
- ❑ Do not use abrasive cleaners, waxes or solvents for cleaning.
- ❑ Do not operate the product under the following conditions:
  - Extremely hot, cold or humid environment.
  - Areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.

Introduction

About Planar's LA1910R / LA1910RTC

The LA19 products all have a 19" flat panel screen with an active matrix, thin-film transistor (TFT) liquid crystal display (LCD).

Features include:

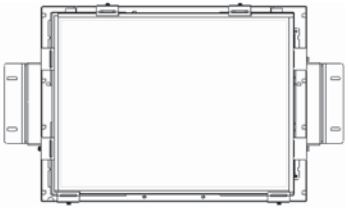
- ❑ Dual signal input: Analog VGA and Digital DVI-D
- ❑ Active matrix TFT LCD technology
- ❑ 1280 x 1024 SXGA resolution
- ❑ 19" viewable display area
- ❑ 31.5 ~ 80 kHz horizontal scan
- ❑ 56 ~ 75 Hz refresh rate
- ❑ 0.294mm x 0.294mm pixel pitch
- ❑ 250 cd/m^2(typ.)brightness
- ❑ 1000:1(typ.) contrast ratio
- ❑ L/R=85°/85°,U/D=+85°/-85° viewing angle, CR=10
- ❑ 8ms GTG with RapidVideo™ Accelerator
- ❑ CCFL backlight lamps w/50,000 hrs life (typ.)
- ❑ Auto-adjustment function
- ❑ Multilingual OSD user controls
- ❑ VESA DPMS power saving
- ❑ Durable touchscreen
- ❑ VESA rear mounting 75mm x 75mm or 100mm x 100mm standard

Touch Screen for LA1910RTC

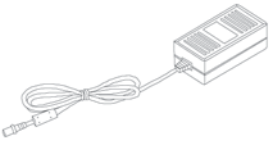
Capacitive for finger interface

- ❑ Surface: Anti-glare treatment
- ❑ Interface: USB
- ❑ Durability: 225 million touches in a single location
- ❑ Hardness: Cannot be scratched using any stylus with Mohr's rating of less than 6.5
- ❑ Transmissivity: up to 88% at 550 nm
- ❑ Driver: Windows® 95/98/Me/NT/2000/XP, Linux

Package Overview

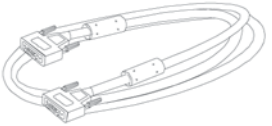


LCD Display



Power Adapter

Power Cord

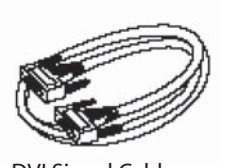


VGA Signal Cable

Landing Strip

Touch Screen Driver Installation CD-ROM (for LA1910RTC)

USB Cable (for LA1910RTC)

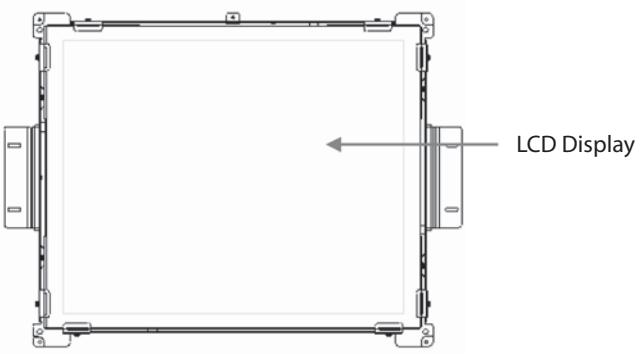


DVI Signal Cable

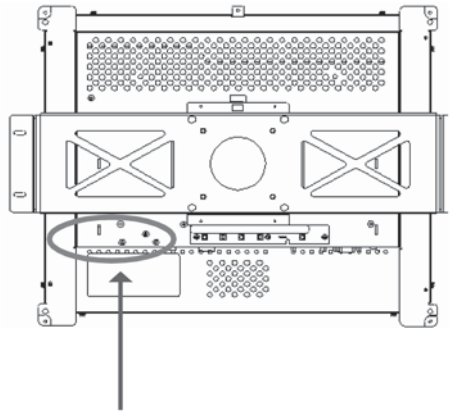
Installation

Product Overview

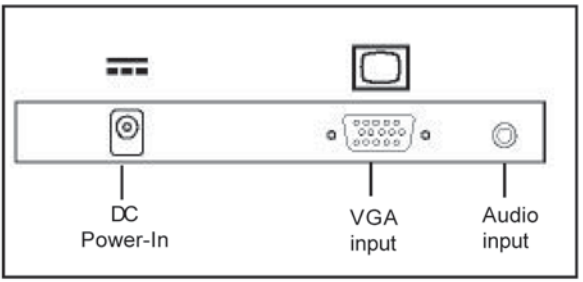
• Front View



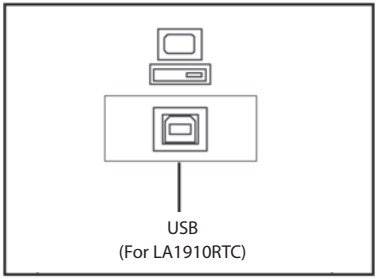
• Rear View



• Connector Ports "A"



• Connector Ports "B"



Connecting the display (Figure 1.1)

To set up this display, please refer to the following figure and procedures.

1. Be sure all equipment is off.

2. Connect the DC power cord to the power connector. Plug one end of the AC power cord into the power adapter, and the other end into an electrical outlet(1).

3. For the PC with Analog graphics output: connect the VGA signal cable from display VGA input connector to the 15-pin VGA connector of your host computer and tighten the screws(2).

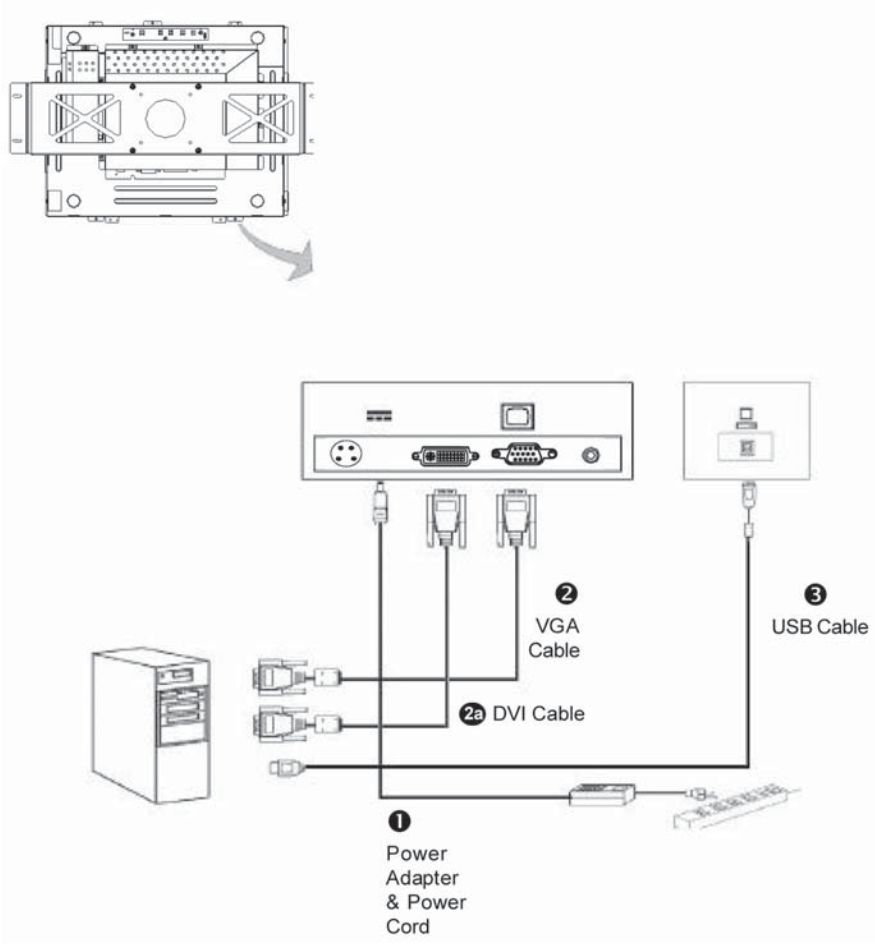
4. For DVI-D output: connect DVI cable from display to the PC(2a).

5. For the LA1910RTC touch screen model configure the touch screen. Refer to the "Touch Screen Driver Installation" section on page 24.

6. Turn on your computer, display and video source.

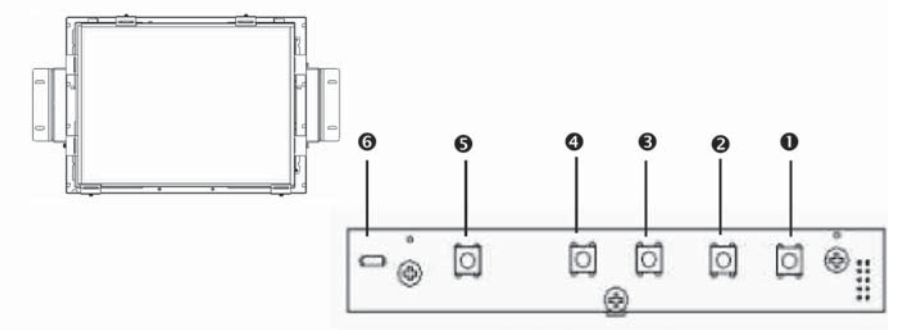
Notice: To ensure the LCD display works well with your computer, configure the display mode of your graphic card to less than or equal to 1280 x 1024 resolution and make sure timing of the display mode is compatible with the LCD panel. "Video Modes" of this LCD panel are listed in the appendices for your reference.

Figure 1.1


❷
VGA
Cable
❸
USB Cable
❷a DVI Cable
❶
Power
Adapter
& Power
Cord

User Controls

Front Panel Controls



No./ Icon	Control	Function
❶	Menu button	Displays the OSD menus.
❷	Select / Auto	Select- To select the adjustment items from OSD menus. Auto- To activate the "Auto Adjustment" function to obtain an optimum image.
❸	Brightness Minus / Minus	1. Decreases the brightness of the display image. 2. Decreases value of the adjustment items.
❹	Brightness Plus / Plus	1. Increases the brightness of the dis play image. 2. Increases value of the adjustment items.
❺	Power Switch	Switches on/off the power of the LCD display.
❻	Power LED	1. Green indicates the display is turned on. 2. Amber indicates the display is in power-saving mode.

How to Use the OSD Menus

1. Press the "Menu" button to pop up the on-screen menu and to select between the four main menus.

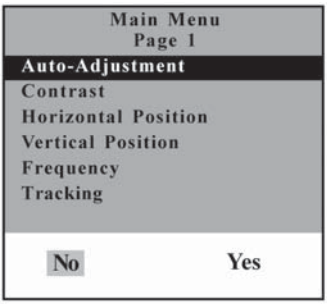
2. Choose the adjustment items by pressing the "Select/Auto" button.

3. Adjust the value of the adjustment items by pressing the " " button.

4. The OSD menu will automatically close, if you have left it idle for a pre-set amount of time.

On-Screen Display Menus

First OSD Menu:



- **Auto-Adjustment**
  Choose this function to obtain an optimum image.

- **Contrast**
  This function allows the user to adjust the image crispness. Contrast adjusts the difference between white and black shades.

- **Horizontal Position**
  Changes the horizontal position of the image.

- **Brightness**
  This function adjusts screen brightness.

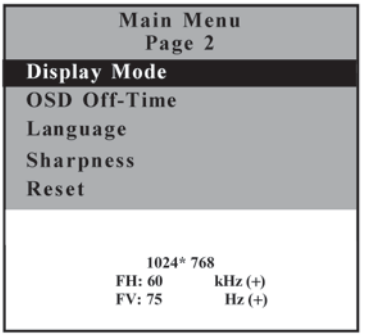
- **Vertical Position**
  Changes the vertical position of the image.

- **Clock**
  Changes the display data frequency to match the frequency of the graphic card. When a vertical flickering bar is seen, use this function to make an adjustment.

- **Phase**
  Synchronizes the signal timing of the display with the graphic card. When you are experiencing unstable to flickering image, use this function to make an adjustment.

On-Screen Display Menus

Second OSD Menu:



- **Display Mode**
  Selects this function to view the display resolution, vertical refresh, and horizontal scan of the current mode.

- **OSD Off-Time**
  Adjusts the time it takes for the OSD menu to disappear.

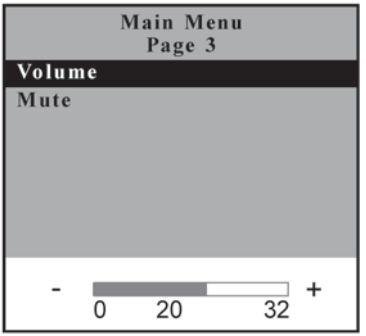
- **Language**
  Chooses the language you need.

- **Sharpness**
  Adjust the sharpness of the image.

- **Reset**
  Returns the display parameters of the current mode to the factory default settings.

On-Screen Display Menus

Third OSD Menu:



- **Volume**
  Controls the sound volume.

- **Mute**
  Disables the sound immediately.

- **Video Source**
  Changes the video mode between multiple connections.

On-Screen Display Menus

Fourth OSD Menu:

- **Color**
  Adjusts the color temperature.

- **Color Adjustment-Red**
  Adjusts the red color of the display.

- **Color Adjustment-Green**
  Adjusts the green color of the display.

- **Color Adjustment-Blue**
  Adjusts the blue color of the display.

Appendix

Troubleshooting

If you are experiencing trouble with the LCD display, refer to the following. If the problem persists, please contact your local dealer or visit Planar Support at www.planar.com/support. See support contact information on rear cover.

Problem: No image appears on screen.

- Check that all the I/O and power connectors are installed correctly and well connected as described in the "Installation" section.
- Make sure the pins of the connectors are not crooked or broken.
- Reconfigure the resolution of your computer to make it less than or equal to 1280 x 1024.

Problem: Partial image or incorrectly displayed image.

- Check to see if the resolution of your computer is higher than that of the LCD display.
- Reconfigure the resolution of your computer to make it less than or equal to 1280 x 1024.

Problem: Image has flickering vertical line bars.

- Use "Clock" to make an adjustment.
- Check and reconfigure the display mode of the vertical refresh rate of your graphic card to make it compatible with the LCD display.

Problem: Image is unstable and flickering

- Use "Phase" to make an adjustment.

Problem: Image is scrolling

- Check and make sure the VGA signal cable (or adapter) is well connected.
- Check and reconfigure the display mode of the vertical refresh rate of your graphic card to make it compatible with the LCD display.

Problem: Ghosting image (characters and graphics)

- Use "Clock" to make an adjustment. If the problem persists, use "Phase" to make an adjustment.

Warning Signal

If you see warning messages on your LCD screen, this means that the LCD display cannot receive a clean signal from the computer graphics card.

There may be three sources for this problem. Please check the cable connections or contact Planar for more information.

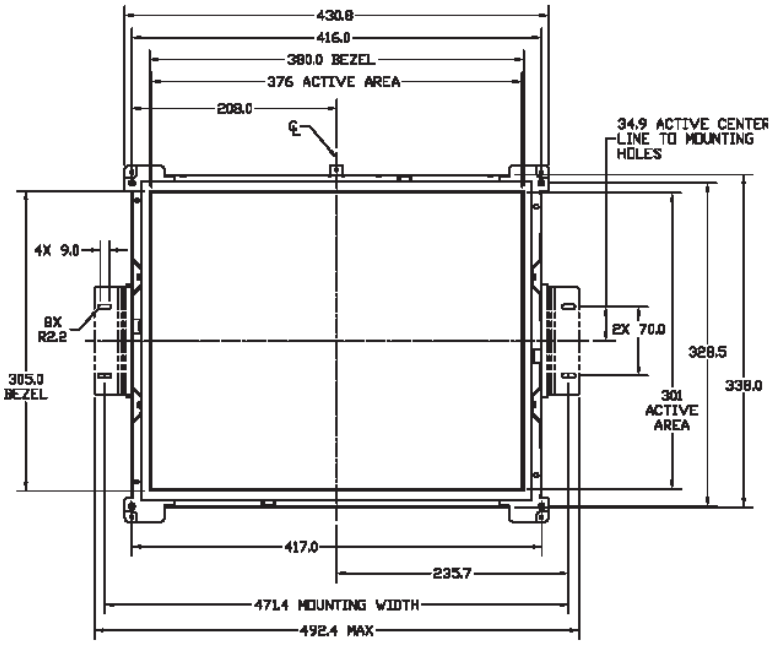
- **No Signal**
  This message means that the LCD display has been powered on but it cannot receive any signal from the computer graphic card. Check all the power switches, power cables, and VGA signal cable.

- **Going to Sleep**
  This message means that the LCD display is under the power saving mode. In addition, the LCD display will enter the sleep mode when experiencing a sudden signal disconnecting problem.

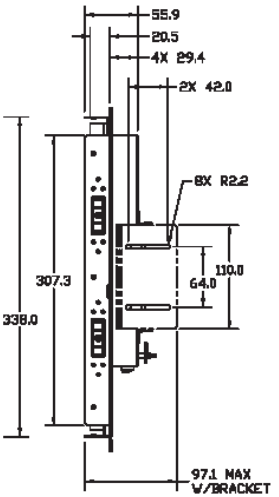
- **Out of Range**
  This message means that the signal of the computer graphic card is not compatible with the LCD display. When the signal is not included in the "Video Modes" list we have listed in the Appendices of this manual, the LCD display will display this message.

Product Dimensions

LA1910R - Front and Side View:

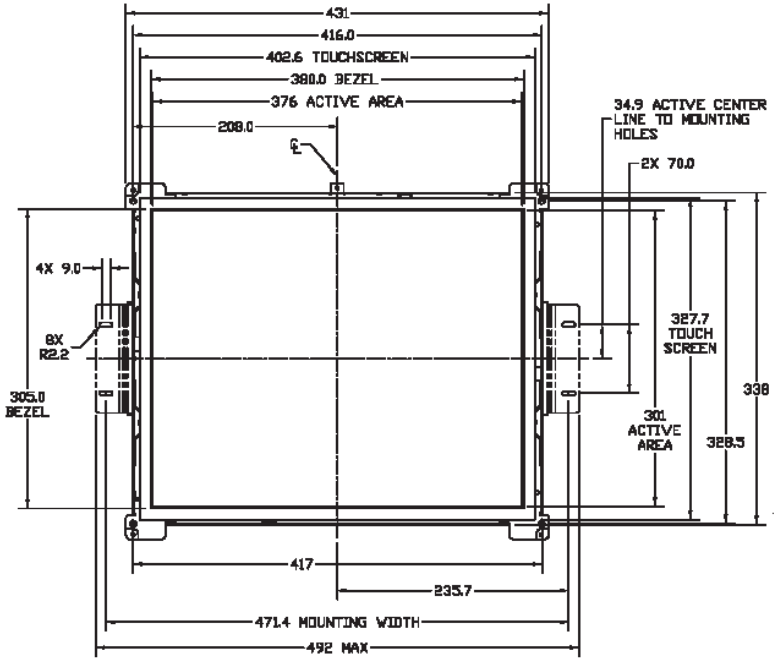


LA1910R Front View

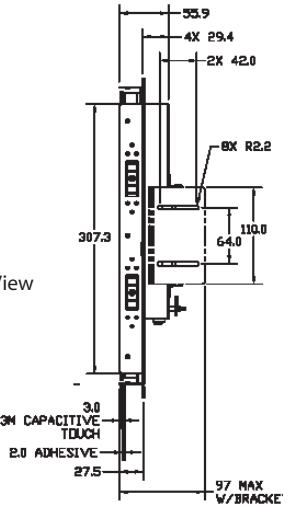


LA1910R Side View

LA1910RTC - Front and Side View:

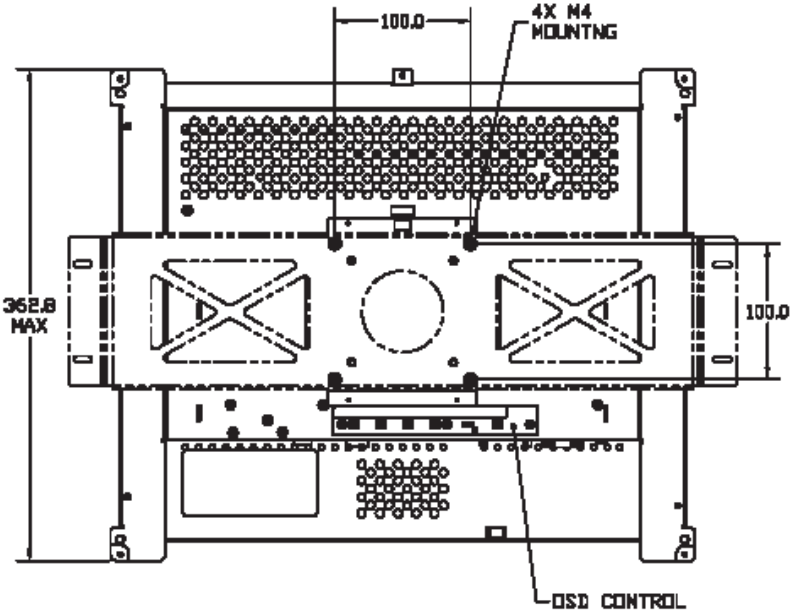


LA1910RTC Front View



LA1910RTC Side View

LA1910R/RTC - Rear View:



LA1910R/RTC Rear View

Video Modes

Mode	Resolution	V.Frequency (Hz)	H.Frequency (kHz)
IBM VGA	640 x 350	70	31.5
IBM VGA	640 x 400	70	31.5
IBM VGA	640 x 480	60	31.5
IBM VGA	720 x 400	70	31.5
VESA VGA	640 x 480	72	37.9
VESA VGA	640 x 480	75	37.5
VESA SVGA	800 x 600	56	35.2
VESA SVGA	800 x 600	60	37.9
VESA SVGA	800 x 600	72	48.1
VESA SVGA	800 x 600	75	46.9
VESA XGA	1024 x 768	60	48.4
VESA XGA	1024 x 768	70	56.5
VESA XGA	1024 x 768	75	60.0
VESA SXGA	1280 X 1024	60	64.0
VESA SXGA	1280 X 1024	75	80.0
Apple Mac	640 x 480	67	34.9
Apple Mac	640 x 480	67	35.0
Apple Mac	832 x 624	75	49.7
Apple Mac	1024 x 768	75	60.2

Touch Screen Driver Installation

Driver Installation for LA1910RTC:

Capacitive Touch Screen with USB Connection

Touch driver information is located on the enclosed CD-ROM for the following operating systems: **Microsoft Windows® XP, Windows 2000, Windows NT 4.0, Windows Me and Windows 9x.**

If you have a USB cable connection disconnect the cable from the monitor or the PC before installing the driver.

1. Be sure that the USB cable is not connected to the PC.
2. Open the CD-Rom.
3. Click the "LA1500RTC, LA1710RTC, LA1910RTC Win 9x, ME, NT, 2000, XP" link.
4. Click "I accept" when the software license screen appears.
5. Follow the step-by-step instructions
6. Reconnect the USB cable to the computer prior to use.
7. If the touch screen driver does not automatically load, restart the computer operating system.

Please read "Readme.txt" located in the unzipped file folder for additional information and assistance.

Linux Driver Installation for LA1910RTC: Capacitive Touch screen with USB Connection

Release 5.62sr1

Touch driver information is located on the enclosed CD-ROM. Supported platforms include: **Red Hat® Linus 8.0, Red Hat® Linux 9.0, and SuSE® Linux 8.2 and SuSE® Linux 9.0 on Pentium®-compatible CPUs. The following Xfree86 versions are supported: 4.0.3 and 4.1.0.**

1. Open the CD-Rom.
3. Click the "LA1500RTR, LA1500RTC, LA1710RTR, LA1710RTC, LA1910RTC Linux" link.
4. Click "I accept" when the software license screen appears.
5. Follow the step-by-step instructions
6. If the touch screen driver does not automatically load, restart the computer operating system.

Please read "Readme.txt" located in the unzipped file folder for additional information and assistance.

Support and Service

Planar is a US company based in Beaverton, Oregon and Espoo, Finland with a worldwide sales distribution network.

Visit Planar at http://www.planar.com/support for product registration, operations manuals, line drawings, touch screen drivers, warranty information and access to Planar's Technical Library for online troubleshooting.

To speak with Planar Customer Support please have your model and serial number available and dial one of these numbers:

Americas Support

Tel: 1-866-PLANAR1 (866-752-6271) or +1 503-748-1100
Hours: M-F, 8am - 8pm Eastern Time | M-F, 5am - 5pm Pacific Time

Europe and Asia-Pacific Support

Tel: +358-9-420-01
Hours: M-F, 7:00am - 4pm CET

Toll or long distance charges may apply.

Planar Systems, Inc.
Customer Service
24x7 Online Technical Support: http://www.planar.com/support

Americas Support
Tel: 1-866-PLANAR1 (866-752-6271) or +1 503-748-1100
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